

REMARKS

This application pertains to a novel plastic film comprising a gas barrier layer which has a oxygen impermeability which is largely independent of moisture content of the packaged product or the surroundings (page 2, first paragraph).

Claims 1-5, 7-21 and 23-26 are pending, claim 6 being cancelled by this amendment.

Claims 24 and 25 stand objected to because missing the term "alcohol" in the expression "ethylene/vinyl copolymer". This has now been corrected, and the objection should be withdrawn.

Claims 6 and 7 stand rejected under 35 U.S.C. 112, first paragraph, because the Examiner views the ranges of 30-45 wt% EVOH and 55-70 wt% multipolyamide as not being supported by the ranges of 10-45 wt% or 20-40% EVOH and 55-90 wt% or 60-80 wt% polyamide recited in the original specification.

Claim 6 has now been cancelled, and the limitations of claim 6 incorporated into claim 1.

As previously pointed out, support for the lower limit of 30% EVOH can be found in the Examples. See Table 1B on page 10, which pertains to a film having a gas barrier layer formed of 30% EVOH and 70% multipolyamide. This, together with the

ranges of 10-45% EVOH and 55-90% multipolyamide recited in the specification, at page 4, lines 16-19, provides support for the EVOH lower limit of 30% and the range of 30-45 wt% EVOH, as well as for the multipolyamide upper limit of 70% and the range of 55-70 wt % for the multipolyamide.

The Examiner's attention is respectfully drawn to MPEP Section 2163.05 (III), where it is taught that the range of 25%-60%, with specific examples of 36% and 50% provided support for a new claim limitation of "between 35% and 60%".

The limits of claims 6 and 7 (now claims 1 and 7) are therefore fully supported by the ranges recited in the specification, together with the amounts recited in the Examples, and the rejection of claims 6 and 7 under 35 U.S.C. 112, first paragraph should therefore now be withdrawn.

Claims 1-13, 15-21, 24 and 25 stand rejected under 35 U.S.C. 103(a) as obvious over Ramesh et al (US 5,763,095).

The Examiner's attention is respectfully drawn to column 5 of the Ramesh reference, wherein it is indicated that the nylon copolymer (=multipolyamide) can be blended with another resin. Among the cited resins to be blended with the nylon copolymer EVOH is mentioned. As far as the blend with the EVOH can be used in Ramesh's packaging films, Ramesh also teaches that during storage the oxygen barrier properties may be impaired because the oxygen barrier properties of such barrier layer

containing a blend with EVOH cause an increase of oxygen transmission. Therefore, it is recommended that only a minor portion of EVOH be incorporated into the nylon copolymer containing layer, if a low oxygen transmission rate of the total film structure is needed, and the package should be stored under relatively low humidities.

Therefore, those skilled in the art would understand from Ramesh that only a minor portion of EVOH be used as a blending component, in accordance with the disclosure of page 5, lines 40-44. Moreover, the blend should only contain a certain (low) amount of EVOH, based on the **partially aromatic nylon** of the nylon copolymer. Therefore, for achieving a low oxygen transmission at relatively high humidities one would stick to the low amount of the EVOH disclosed in column 5; namely 25% by weight, based on the partially aromatic nylon. In column 4 the amount of the partially aromatic nylon is disclosed, namely 10 to 60% per weight of hexamethylene isophthalamide. From such a range 25% by weight, the lower limit of the amount of EVOH that can be blended with the nylon copolymer, would be 2.5 to 7.5% by weight of the nylon copolymer in the barrier layer.

Therefore, a person skilled in the art would learn from the Ramesh disclosure that in order to keep a low oxygen transmission rate at high humidity the amount of a blended EVOH should be in a range of 2.5 to 7.5 weight % based on the total amount of the nylon copolymer. Bearing this in mind it is interesting to note that in the examples 1 to 8 where the barrier layer of the multilayered films used for packaging does **not** contain an EVOH component, the physical properties such as the oxygen transmission

at several humidities are measured and cited in the relevant table. In Examples 9, 11 and 12 according to which a multilayer film containing a barrier layer based on a blend of a nylon copolymer and EVOH (10% respectively 5%) no oxygen transmission rates are mentioned at all. Therefore, the only teaching in the Ramesh patent concerning the oxygen transmission rate is that the amount of EVOH in the barrier layer should be low in order to avoid problems because of the increase of the oxygen transmission rate at higher humidities.

This would clearly prejudice a person skilled in the art against increasing the amount of EVOH in the barrier layer, such as Applicants have done, to a lower limit of 30% by weight. Contrary to the teaching of Ramesh, the oxygen transmission rate could be kept nearly unchanged when increasing the humidity from 0 to 85% relative humidity. This is a very surprising result achieved by the present invention!

The accompanying declaration under Rule 132 of Bernig Walter, one of the inventors herein, confirms this result. Very surprisingly in comparison to the result achieved with the known multilayered film containing 20% by weight EVOH in the barrier layer which is very sensitive to an increase in the relative humidity, Applicants' film structure keeps the low oxygen transmission rate even at relatively high relative humidity.

Applicants' claims cannot therefore be seen as obvious over the Remesh reference, and the rejection of claims 1-13, 15-21, 24 and 25 under 35 U.S.C. 103(a) as obvious over Ramesh et al (US 5,763,095) should now be withdrawn.

Claim 14 stands rejected under 35 U.S.C. 103(a) as obvious over Ramesh (US 5,763,095) in view of Vadhar (US 6,333,061).

The differences between the invention recited in Applicants' claims and anything that can be learned from the Ramesh reference are discussed above. The Examiner turns to the Vadhar reference for a coloring agent tie layer. No coloring agent could possibly overcome the differences discussed above, and the rejection of claim 14 under 35 U.S.C. 103(a) as obvious over Ramesh (US 5,763,095) in view of Vadhar (US 6,333,061) should be withdrawn.

In view of the present amendments and remarks it is believed that claims 1-5, 7-21 and 23-26 are now in condition for allowance. Reconsideration of said claims by the Examiner is respectfully requested and the allowance thereof is courteously solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Applicants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit Account No. 14-1263.

Respectfully submitted,
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